

REMARKS

The present invention relates to a process and an apparatus for manufacturing an electret article.

The sole rejection in the Office Action of November 18, 2009, is the rejection under 35 U.S.C. 103(a) of claims 1 - 10 based on U.S. Patent 6,375,886 (Angadjivand) in view of the Cinar Non-Patent Literature (NPL) document. The Angadjivand reference relates generally to a method and apparatus for making a nonwoven fibrous electret web, and the Examiner generally relies on Angadjivand as allegedly disclosing the claimed features of the present invention. At page 4 of the Office Action, the Examiner has recognized that Angadjivand "does not expressly disclose the average diameter of the drops is less than 20 microns." The Examiner cited Cinar as disclosing "droplet formation in steam flow wherein steam droplets are disclosed to have diameter size typically less than 20 microns (figure 6)", and that the droplet size depends on the applied pressure; the Examiner explicitly stated that "Cinar is only relied on to teach a droplet formation with diameter size typically less than 20 microns are conventionally formed in steam nozzles."

In the present Amendment, Applicant has incorporated claim 2 into claim 1, and has accordingly cancelled claim 2. Particularly, independent process claim 1 now explicitly requires that the thermoplastic resin fibers, *inter alia*, are not subjected to a drying step after passing through the mist space.

Applicant respectfully submits that claim 1 clearly differentiates over, and is not obvious in view of the Angadjivand reference; furthermore, the Cinar reference, which is relied upon only with respect to teaching a droplet formation the size of the droplets formed, does not make up for the deficiencies of the Angadjivand reference with respect to the present claims. This is discussed in further detail below.

With respect to the recitation of claim 3, the Examiner admits that Angadjivand does not expressly disclose the feature, but the Examiner appears to assume that the claim 3 recited feature would be obvious to one of ordinary skill in the art in view of Angadjivand's teaching of adjusting the liquid droplets content as necessary in order to obtain the desired results.

With respect to claims 5 - 6, the Examiner has not addressed the higher resistivity recited in claim 6.

Applicant respectfully submits that Angadjivand does not teach that a drying step would not be necessary when the diameter of the droplets used would be less than 20 μm .

Contrary to the Examiner's apparent impression, according to Angadjivand, a drying step is a very important step in his process. This is not inconsistent with the fact that Angadjivand allows the use of a passive drying mechanism, which means that the drying step could take place at ambient temperature. Nevertheless, Angadjivand notes that drying at ambient temperatures would not be generally practical for high speed manufacturing operations. There is no basis in Angadjivand's disclosure for concluding that the drying step can be omitted. Rather,

this sentence, taken in context, should be understood to mean that active drying mechanisms are preferred.

Still further in this regard, from the text at column 9, line 62-64, where Angadjivand continues to describe the further process steps with the words: "After drying, the resulting charged electret web 39.....(can be subject to further operations)...", one can only conclude that drying is necessarily an important process step according to Angadjivand.

Yet even further, the drying step is an essential required feature of the Angadjivand process recited in claim 1 of the Angadjivand reference.

As was noted above, the Cinar reference was relied upon only with respect to teaching droplet formation size, and does not make up for the deficiencies of the Angadjivand reference requiring a drying step, in contrast to the process of claim 1 above.

The process claims dependent on claim 1 are equally nonobvious and patentable over the cited references for the same reasons as claim 1, although it is noted that such preferred embodiment dependent claims may also be patentable for additional reasons. E.g., the Examiner has not addressed the high volume specific resistivity value recited in claim 6, and the Examiner admits that Angadjivand does not expressly disclose the feature of claim 3 but appears to simply assume that such feature would be obvious without explaining how one following the teachings of Angadjivand would be lead to achieve the claim recited feature, etc.

In view of the above, reconsideration and allowance of now pending claims 1 and 2-10 of this application are now believed to be in order, and such actions are hereby earnestly solicited.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the local Washington, D.C., telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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23373

CUSTOMER NUMBER

Date: March 18, 2010



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